DOCUMENT RESUME

ED 086 021 FL 004 842

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TITLE Contrastive Analysis and Linguistic Creativity.
INSTITUTION Hawaii Univ., Honolulu. Dept. of Linguistics.
PUB DATE Apr 71
NOTE 15p.; Paper presented at the Pacific Conference on Contrastive Linguistics and Language Universals (Honolulu, Hawaii, January 11-16, 1971)
JOURNAL CIT Working Papers in Linguistics; v3 n4 p57-71 Apr 1971

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Comparative Analysis; *Contrastive Linguistics; *Creativity; Deep Structure; *Distinctive Features; *Figurative Language; Grammar; Italian; Language Styles; *Language Universals; Linguistic Patterns; Metaphors; Modern Languages; Physical Characteristics; Psycholinguistics; Semantics; Sentence Structure; Spanish; Surface Structure; Syntax

ABSTRACT

The distinction between artifact and tool is introduced into the study of language diversity and the posting of linguistic universals. A complicating factor in all language investigations is the use of language as the chief tool to create new language. Analogy and metaphor are considered as two major creative forces at work in all languages. Understanding how these creative forces operate leads to an explanation of linguistic diversity within the framework of universals. If we wish to do more than chart linguistic diversity, we shall have to move to a consideration of innate creative forces. (Author)

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CONTRASTIVE ANALYSIS AND LINGUISTIC CREATIVITY

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Abstract: The distinction between artifact and tool is introduced into the study of language diversity and the positing of linguistic universals. A complicating factor in all language investigations is the use of language as the chief tool to create new language. Analogy and metaphor are considered as two major creative forces at work in all languages. Understanding how these creative forces operate leads to an explanation of linguistic diversity within the framework of universals. If we wish to do more than chart linguistic diversity, we shall have to move to a consideration of innate creative forces.

1. Language as artifact and tool. Man is a maker, a creator. Among his creations are the artifacts of his technology, the conceptualizations of his science and philosophy, and the various systems with which he gives structure to his sociocultural being. Certainly one of man's most important creations is his language. In its complexity, it not only provides for communications in society but it also reflects the functions of each man's psyche.

In his creating, man uses tools which he either makes himself or acquires from other men who make them. In any event, man's tools may be considered as extensions of his physical structure. A hammer serves to increase the striking force of the fist; a long stick, to gain leverage. Going from a consideration of such primitive tools as hammers and levers to the most sophisticated ones recently developed by man, the status of tools as extensions of human anatomy becomes even more apparent. There is a whole new class of tools called 'teleoperators', intended for use in handling radioactive materials, in lunar explorations, and in any work which requires both force and accuracy at a distance from the user. Such tools are attached directly to the user's body and are manipulated by natural bodily movements. The teleoperator principle is sometimes employed in medicine for the replacement of amputated limbs.

Man's tool making is not limited to his physical endeavors. Philosophers, logicians, physicists and other 'thinkers' customarily create abstract entities which they utilize in their theorizing. For many linguists, the phoneme has been very useful in this respect, despite the confusion about its functional status. Indeed, the controversy over the phoneme illustrates only too well a general problem in linguistic methodology. Whereas tools used in making physical objects are distinguished from their products with

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comparatively little difficulty, theoretical concepts are not so easily separated from the objects of their applications. Are phonemes to be thought of as parts of language? Or are they more appropriately interpreted as descriptive devices (i.e., tools)? In more general terms, are phonemes analytical instruments or integral parts of language systems? This state of affairs reflects an important feature of language and language use in general. In order to discuss, interpret or change language, speakers have recourse only to the language itself. Natural language is both artifact and tool, and serves as its own metalanguage.

The tool/artifact distinction as applied to language suggests two major types of language universals: (1) those which derive from the fit of language as a tool to man's anatomical and psychic structure and (2) those which relate to the form of language as an artifact, a reflection of man's system-building. Finding language universals of the first type entails a study of the physical and psychological foundations of human speech. I can point to the work of Eric Lenneberg (1967) as a contribution to this endeavour. The second type of universals requires the collaboration of logicians, ethnoscientists and sociolinguists in the uncovering of logical and socially-derived constraints on language systems. Many linguists and anthropologists have been concerned with universals of this second type, e.g., J. Greenberg (1966), Fuch and Harms (1968), and Berlin and Kay (1970). However crude it may be, this classification of universals seems more fruitful than one which hinges on the formal/substantive distinction, since the latter would appear to be relevant only to a consideration of language as artifact.

2. The logical/rational aspect of language. If we consider language as an artifact, we are inevitably led to a discussion of grammatical systems. Linguistic theories as outgrowths of traditional grammar have long concentrated on the logical/rational aspect of language. A popular contemporary definition is that language is 'rule-governed behaviour'. It is somewhat anachronistic to observe that the modern Cartesian view of grammar held by Chomsky and others does not really differ from the older structural one in this respect, despite avowals to the contrary. Both seek to describe what is systematic about language. If the generative view is the more effective of the two, it is because an operational, mechanistic theory is more demanding than a taxonomic one. Allowing for the production of infinite numbers of novel but grammatically correct sentences entails the rigorous application of formal and mechanical criteria, such as simplicity, explicitness, accuracy, and completeness, to the grammar that is written. Rather than discard the corpus of language data on which the structuralists relied, the generativists have extended it to include all possible sentences in the language. The only difference between the structuralist and the generativist view of corpora seems to be the rather trivial one

that all the relevant language data are not locatable in the generative linguist's field notes.

As a result of this logical/rational view of language, linguistics has drawn nearer to mathematics and engineering. It would probably not surprise anyone in this audience of linguists to hear proposals that the 'deep structure' of language should take the form of mathematical logic, or that the interpretation of the rules of language as machine-oriented is 'intuitively correct'. This is not to say that such views have gone unchallenged. Hockett (1968) has argued that language is, by nature, ill-defined and therefore neither open to description via formal rules nor mechanical. To make his point, Hockett utilizes a form of logic called the theory of computability and unsolvability. He concludes that while language is ill-defined as a system, it does have stability.

I would like to avoid such arguments as to the logical basis of language and interpret, instead, that part of language which is statable in the form of rules (i.e., its grammatical system) as one product of man's linguistic creativity. What seems to be missing in discussions of the logic of grammar is the role of man as a creator. Linguistics must come to grips with the fact that man shapes his language to fit all his needs of expression. If natural language is capable of handling logical operations and relationships, it is also able to convey man's non-logical, but equally important, social and emotional requirements. If man is logical at times (as when he attempts to construct grammars), he can also think thoughts and do deeds that are everything but rational. In fact, we are apt to make many unproven assumptions even when we think we are being perfectly logical. For example, what evidence have linguists really amassed to prove that linguistic competence in a given language entails the possession of only one grammar or, alternatively, that every language has only one grammatical system? We have assumed that each language can be represented in terms of one grammar without considering the limitations of this assumption. Green (1969), in a study done on children, suggests that the artifact we call 'grammatical system' grows along with the ability to produce sentences and a child exposed to more than one language may not automatically form unique sets of rules for these languages. Furthermore, if languages could be explained totally in terms of their formal grammatical systems, they would have no 'idioms', or expressions that appear to violate a part of these systems. That all human languages have idioms is, of course, another assumption. But it is no more of an assumption than the ones about the existence of a lexicon and a syrtactic base in grammar. The latter are components which occupy very central positions in contemporary grammatical theory. They have received much attention by linguists in logical/rational terms but have seldom been subjected to empirical validation.

3. Main proposals and their implications for contrastive analysis. The most important of my proposals is that language derives from a number of creative forces which are endowed in man and which remain in constant operation throughout his life. These forces are grouped under the heading of 'linguistic creativity'. This creativity is manifested not only in the production of infinite numbers of sentences but also in the continual formation of grammatical systems. My second proposal concerns the operations of these creative forces. Since language stands as both an artifact and the tool used by man in implementing his linguistic creativity, we shall have to disambiguate the universally shared forces of that creativity from their results in specific languages. Two such forces are analogy and metaphor. Each will be discussed briefly in sections 4 and 5 of this paper.

If contrastive analysis is to rest upon foundations open to empirical validation, it will have to incorporate the view that linguistic creativity stems, in a non-arbitrary fashion, from man's physical and mental structure (for further treatment of this matter, see my forthcoming book, Language structures in contrast, Newbury House, 1971). Indeed, no study of language should be divorced from the larger study of man's physical endowment and his perceptive abilities. A Whorfian hypothesis of relativity, for those who would still subscribe to it, would then apply only to language as artifact and not to the forces of linguistic creativity, themselves. In other words, diversity among languages must arise from the many ways in which man is able to implement his creative forces. Some of the psychic and physical bases of linguistic creativity are presented in section 6.

4. Analogy as a creative force. We can proceed from a dictionary-like definition of analogy as that process whereby similarities or likenesses are enforced among otherwise diverse forms. In language, there are two major ways in which analogy operates: (1) in the creation of paradigms and (2) in the formation of entire grammatical systems.

4.1 The creation of paradigms. The paradigms of a language appear to originate in the speaker's awareness of semantically related forms which share some similarity in phonetic shape. It is important to include both meaning and sound in our discernment of paradigms. If the speaker focussed only on meaning as a criterion, he would have no trouble recognizing the following words as part of a paradigm in English: monocle, eye glass(es), binoculars, spy glass, telescope, and microscope. All of these words have to do with vision and with some apparatus which enhances vision. Yet, for most speakers of English, they probably are nothing more than a list. If, on the other hand, phonetic similarity were the only criterion, the following list might have paradigmatic value: youngster, teamster, sister, and lobster.

Clearly, the speaker keeps both sound and meaning in mind when he systematizes neologisms in his language. A new verb entering Italian, for example, is likely to be classified as only one of three possible conjugation types, unless there is some diverting association of meaning. The new verb allunare 'to land on the moon' was placed in the first conjugation and was opposed semantically to an already existent verb, atterrare, which has, among its senses, 'to land (on earth)'. The verb atterrare also means 'to knock down', but this additional sense does not interfere with the analogizing process involved in forming allunare. Although the same impulse to place new verbs in only one of several conjugation types exists among speakers of French, the French counterpart to allunare is allunir and not *alluner, which would have had the phonetic shape of other new verbs. We observe, however, that the two senses of 'to land' and 'to knock down' have been assigned to separate verbs in French: atterrer 'to knock down' and atterrir 'to land'. Making a new verb with the meaning 'to land on the moon' but with phonetic similarity to atterrer rather than to atterrir would have resulted in a skewing of the opposition and a misapplication of the analogical force.

While analogy seems to be a universal aspect of linguistic creativity, its results can be quite different, even among closely related languages. The inflectional patterns of verbs in Spanish and Italian provide a good illustration. Let us assume, for the moment at least, that grammar has a deep-to-surface dimension. Moving along this dimension, we find that in both Spanish and Italian, time reference and agent are regularly reflected in verb forms. The Spanish verb form cantábamos and its Italian counterpart cantavamo convey, equally as well, the information 'we were singing' (where time is 'past continued' and agent is plural and includes the speaker). If we were to collect all the surface data in both languages which relate to the same action ('singing') and the same time reference, the result would be what the grammarians are accustomed to calling 'the conjugation of the verb in the imperfect tense':

Spanish	Italian	
cantába	cantávo	'I was singing'
cantábas	cantávi	'You were singing'
cantába	cantáva	'He, she, it was singing'
cantábamos	cantavámo	'We were singing'
cantábais	cantaváte	'You (plur.) were singing'
cantában	cantávano	'They were singing'

(The examples are given in normal orthography, except for the placement of stress).

Surface restrictions cause the constituents of each form to be ordered in the same sequence in both languages, e.g., Verb Stem + Time Marker + Person. Taking Spanish by itself, we can observe several analogies which have operated consistently. For instance, the stress has been placed on the final vowel of the verb stem (the so-called 'thematic vowel') in all forms. Secondly, the tense marker is uniformly ba throughout, with -s, -nos, -is and -n serving as the person markers. Contrasting the Spanish paradigm with that of Italian, we find that the stress placement is not identical. Moreover, the first person form shows person inflection (cantavo, as opposed to cantaba). Certain rules of vowel elision operate in Italian to yield -vo from -va + o and -vi from -va + i.

We should not even expect analogy to have an equal degree of pervasiveness with the same language. Whereas Italian maintains the same pattern of tense marking for the imperfect throughout all conjugation types (-va in all cases), Spanish does not:

Spanish	Italian	
dormía	dormívo	'I was sleeping'
dormías	dormívi	'You were sleeping'
dormía	dormíva	'He, she, it was sleeping'
dormíamos	dormivámo	'We were sleeping'
dormíais	dormivóte	'You (plur.) were sleeping'
dormían	dormívano	'They were sleeping'

(The verbs dormir in Spanish and dormire in Italian are considered to be of a different type from verbs with the thematic vowel -a- in either language).

The variety of ways in which analogy may operate in related languages becomes more apparent if we include in our contrastive analysis the comparable tense in Alcamese Sicilian, a dialect of Italian:

cantáva	durmía
cantávi	durmívi
cantáva	durmía
cantávamu	durmíamu
cantávavu	durmíavu
cantávanu	durmíanu

This Sicilian dialect has some surface patterns like Spanish and some like Italian. There is the same stress placement (regularly on the thematic vowel) and the same variation in tense marking across conjugation types as in Spanish:

Sicilian:	cantáva	durmía
Spanish:	cantába	dormía

The one exception to the marking of tense is the second person singular form where Sicilian has the same tense marking in both conjugation types, as does Italian:

Sicilian:	cantávi	dormívi
Italian:	cantávi	dormívi

The contrasts in the phenomena of paradigm analogizing in Spanish, Italian, and Sicilian can be summarized in the form of a table:

	Italian	Sicilian	Spanish
1. First person concord*:	+	-	-
2. Same tense marker in both conj. for 2nd. per:	+	+	-
3. Same tense marker in both conj. for other per:	+	-	-
4. Stress placement fixed on thematic vowel:	-	+	+

Table with Samples of Paradigmatic Analogy.

(*Both Spanish and Sicilian analogize first with third singular persons.)

I could go on to discuss other ways in which analogy has worked, as in noun pluralization (e.g., Italian la mano 'the hand'/ le mani 'the hands' and Spanish la mano / las manos where a regular plural pattern is unaffected by an irregular gender assignment, as contrasted with Sicilian la manu/li manu where irregular gender assignment has blocked regular pluralization), but my intention here has been only to point out how analogical forces give form to surface grammar and provide channels for deep-to-surface realizations. A consideration of analogy has important implications not only for contrastive analysis (to which it adds a new mode of contrast) but to linguistic theory, as well. As Harris (1970) has pointed out, paradigm formation via analogy has not occupied a formal position in generative grammar. The conceptualization of specific paradigm patterns must surely be as much a part of linguistic competence as that ability of the speakers of a language which enables them to utter and recognize nonsense words which follow the phonological patterns of their language.

4.2 The formation of grammar. Another phenomenon of linguistic creativity relating to contrastive analysis but almost totally obscured by linguistic theorists is grammar formation. The processes by which language-specific grammars are formed from man's innate

(and therefore universal) language abilities have been confused with the constituents produced by these processes. Thus, we hear arguments against the separation of adjectives and verbs. Proposals, such as those of Lakoff 1965, Ross 1967 and others, are seriously considered whereby adjectives are universally derived from verbs, as if the syntactic behaviour of the latter constituents are ipso facto more basic than those of the former. Among linguists specializing in the Romance languages, a counter argument associates adjectives with nouns (see Di Pietro 1971, for further discussion). In either case, certain features of syntax are promoted over others to make the point. Along similar lines, Seropian 1970 argues for the existence of a verb be in semantic structure.

Involved in this matter is the nature of 'deep' structure, or, more properly, the need for diverse layers of structuring in grammatical systems. Is deep structure a model of thought or is it that part of language which interprets thought? Regardless of how we finally handle it, or even if we reject it, there is no reason to believe that any of the grammatical terminology in use today will be appropriate to it. In my forthcoming book (Di Pietro 1971), I propose that an entirely new set of terms be drawn up for the discussion of universals which would not imply the structural properties of any language-specific grammar. Whatever terminology we finally agree upon, it will have to be in keeping with the findings of medical psychologists, cognitive anthropologists, experimental phoneticians, and other investigators concerned with the interfaces between language and man's total being. At present, the most popular themes in linguistics center about the logical arrangement of grammar. An entire seminar at the forty-fifth meeting of the Linguistic Society of America pitted McCawley against Katz in a discussion of how to formulate that component of grammar which we call semantics.

It is becoming obvious to some theorists, however, that arguments over the logical form of rules result only in alternative and equally ad hoc sets of logical rules. Lakoff (1970) is among those generative linguists who have come to realize this dilemma. Saltarelli (1970) is another. After reviewing alternative solutions provided by the standard theory of generative grammar for the inflection of nouns and verbs in Italian and selecting one solution over the other in keeping with the criterion of simplicity, Saltarelli admits (1970, p. 74) that no really great explanatory power has been gained. He decides that it may be impossible to achieve high levels of explanation in the case of Italian noun and verb inflection.

Rather than attempt to reconcile grammar with the observations of researchers in language-related fields (such as those mentioned above), Lakoff (1970, p. 637) concludes: "...there is a very good

reason to believe that transformations do exist", and proceeds to make such rules more inclusive or 'global'. He apparently believes that when ad hoc rules are made to be more general, they will no longer be ad hoc. Regardless of how sophisticated we make our grammars, we shall do nothing more than postpone the day when an empirical foundation must be found for them.

The limitations of logical theorizing about language is immediately felt in such applicational fields as contrastive analysis. If we are ever to produce a truly viable CA of two languages, we must be able to distinguish between such apparently universal human abilities as naming and verbalizing (i.e., describing relationships and actions) and the grammatical systems which man builds for himself. There is evidence of empirical support for the dicotomy between naming and verbalizing which I shall take up below (section 6). Our contrastive analysis must include a protocol whereby the analyst can demonstrate the particular ways in which the speakers of diverse languages have brought universally shared linguistic processes to bear in forming both language-specific sentences and language-specific grammars.

5. Metaphor as a tool of linguistic creativity. Yet another aspect of linguistic creativity is subsumed under the heading of metaphor. Unlike analogy, metaphor is that force whereby an association of forms can be made which does not depend on semantic or phonetic similarity. There are various kinds of metaphor but the one I shall concentrate on has to do with the reformation of grammatical rules either by extending their domain or by changing their form. There is no doubt in my mind that metaphor is a universal feature of linguistic creativity, but to demonstrate how this is so would require many pages and I shall have to leave it for a future study. Suffise it to say here that metaphorical processes figure prominently in mathematical formulation, in poetry and in historical linguistic change. The mathematical statement, 'let x equal...', initiates a metaphor because the sense of one entity is transferred to another. It is not difficult to see how computer programming languages are sets of terse metaphors representing specific functions capable of being performed by the computer. Metaphors abound in poetic language. Consider the following poem by Emily Dickinson, in which lexemes like heart and love are given a concrete, inanimate sense, as if they were physical objects of a household:

> The bustle in a house
> The morning after death
> Is solemnest of industries
> Enacted upon earth, --

The sweeping up the heart,
And putting love away
We shall not want to use again
Until eternity.

(From p. 438-9, The Oxford Book of American Verse, selected by F. O. Matthiessen, New York: Oxford University Press, 1950).

Vygotsky (1962, p. 128) gives some examples of how metaphor operates differently in various languages and is interconnected with the grammatical system built by the speakers of each language. He mentions Krylov's substitution of a dragonfly for the grasshopper in his Russian translation of La Fontaine's fable, La cigale et la fourmi, because the word for grasshopper in Russian is masculine and does not convey the 'lighthearted, carefree attitude' of the French cigale . Tjutchev, another Russian translator, did something similar in his substitution of a 'cedar tree' for a 'fir tree' in rendering into Russian a German poem about a fir and a palm. Since the tree references are metaphors for the love between a man and a woman, it would not do to use literal translations of fir and palm. Both trees are feminine in Russian.

To add a further dimension to Vygotsky's examples, we can cite the variety of expressions languages have for endearment. In English, such references are often to taste: sweetheart, honey, sugar, and so on. In French and Italian, comparable metaphors involve vegetable names. An Italian lad might call his girl friend, his cipollina ('little onion') and a French boy might use mon petit chou ('my little cabbage'). The owl who is so wise in English can only be involved in an Italian metaphor for a rather stupid person, a gufo; or, if it is a little owl, a civetta, the reference is to a flirtatious young lady.

Very little work has been done concerning the ways in which metaphors stem from the human psyche. In an article in the International Journal of Psycho-Analysis, Sidney Baker (1950) discusses the importation of the domesticated European cat into the Maori culture of New Zealand and its linguistic implications. He observes that the use of the Maori word tore to mean 'cat' also involves the same sort of sexual associations found in other languages even though the animal was new to the Maoris. He concludes that these associations arose from universally shared sexual motifs which occur in dream symbolism. To support his thesis, he gives a lengthy list of 'phallic symbol-complexes' not only in Maori but in Hawaiian, Tahitian, Samoan, and Fijian, as well.

Of course, there are many problems to be solved before we can incorporate metaphorizing in our contrasting of languages. First of all, we will have to establish formal ways to empirically validate the associational value of each potential metaphor. Secondly, we will have to distinguish the universally shared metaphorical processes from their language-specific products. However difficult these problems may be to solve, there is every reason to believe that metaphor should be considered as an aspect of linguistic creativity.

Elsewhere (Di Pietro 1970), I have shown how grammars with finite numbers of formal rules do not adequately account for metaphor. The number of reformative rules required to explain every metaphorical violation of the grammatical system would be endless. My conclusion is that while finite grammars of the generative type can produce an infinitely large number of innovative sentences (here 'innovative' means novel sentences which are retraceable to stable and ordered rules), such grammars do not provide for the production of metaphorically creative sentences. As I mentioned in section 2 of this paper, the existence of expressions in every language which do not fit exactly within the formal system of rules (called 'idioms') are the signs of the operation of creative forces, such as metaphor, outside the formal systematizing of grammar.

6. Some psychic and physical bases of linguistic creativity. As a final topic in this paper, I would like to discuss how the language tools used by man in the implementation of his linguistic creativity have psychic and physical bases.

Bruner (1967-68, p. 63) has indicated that the division of holding and operating skills between right and left-hand among humans may be connected with the grammatical distinction of topic and comment. The ability to grasp objects with one hand and work on them with the other apparently has led man to distinguish between objects and sets of relationships among objects. It is medical knowledge that the child's acquisition of language is speeded up significantly at about the same time that he becomes right or left-handed. A child who is retarded in developing 'handedness' will also have speech difficulties—notably stuttering. Aphasia victims, to give another bit of supporting evidence for the interconnection of grammar with man's physical structure, may experience 'difficulty in word finding' and ordering of lexical items, among others (see Lenneberg 1967, p. 193; 195ff.). Since aphasia can be suffered by all men, regardless of their language, I presume that it affects those universally shared tools of language. As Lenneberg (1967, p. 175) puts it, language is intimately integrated with man's 'neuronal and skeletal structures'.

Freedman, Cannady and Robinson (1970) point out other ways in which language development is intimately connected with the physical development of man. In their study of handicapped children, Freedman and his associates observe that: "the congenitally blind child,

despite considerable facility in the use of speech, is delayed in the use of the first person pronoun. For the congenitally deaf child, 'I' may be one of the first words to be used". Ego-identity apparently requires a visual orientation--an observation which should lead linguists to reconsider the ways in which they order the formal rules of their grammars.

Among anthropologists interested in relating man's cultural activities and perception to the structure of his language, I can cite the work of such ethnoscientists as Brent Berlin and Paul Kay. Their recently published book (see Berlin and Kay, 1970) represents a move away from the relativistic classification of colors in various languages toward a universally valid framework which non-arbitrarily reflects man's perception of the world in which he lives. It is clear from reading the accounts of Berlin and Kay's research that a contrasting of semantic elements must rest firmly on a universalist basis of shared properties which, in turn, must reflect man's perception of his world.

Robert Hall is one linguist who seems to believe that linguistic creativity no longer exists in man. He feels that an age of creativity may have existed thousand of years ago during a stage of human evolution when language was first developed, but it is no longer present in man (see Hall, 1968, p. 21-2). Cook, in reviewing Hall's book aptly questions this view of creativity. He writes (1970, p. 1153-4): "...if we accept Hall's definition of creativity we are left with explaining (1) why we don't have it any more, and (2) the impact of this loss on language structure; for, if creativity is to be linked to the structure of the brain and that structure is altered so that creativity is no longer possible, then the altered brain structure must have some impact on language." The evidence, some of which I have cited in this paper, seems to point in precisely the opposite direction, namely, that creativity is very much a part of modern man's language abilities and is intimately connected with his physical and psychic being.

7. Concluding remarks and summary. I have argued that linguistic creativity must be taken into account in the contrasting of languages. To ignore it would be to limit our contrastive analysis to the ways in which the formal models of grammar satisfy logical criteria. Since contrastive analysis, as an applicational field, depends heavily on the theoretical formulations of linguists, it is good to find some linguists, like Fraser (1970) and Chafe (1971), occupying themselves with how the generation of sentences fits into larger theories of speech acts. Garvey's work (1970) is perhaps even more indicative of fruitful directions for contrastive analysis. Rather than bring non-linguistic elements to focus on sentence formation, she has concerned herself with the typing of conversational structures in which sentences are used.

Analogy and metaphor are most likely not the only creative forces present in man, but they appear to be important ones. Languages, as long as they have native speakers, seem to be in a constant state of creation. The reason for this unending change is probably because men continue to learn languages and to use them. Diversity cannot be explained by limiting our analysis to the logical foundations of language. If we restrict ourselves to systematic grammar, we will only be able to chart language diversity. To explain it would seem to require that we move to a consideration of man's innate creativity, whereby grammars are formed.

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